

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C. 20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)

18 October 2000 (18.10.00)

International application No.

PCT/KR00/00177

Applicant's or agent's file reference

EMYANGSANGTO

International filing date (day/month/year)

07 March 2000 (07.03.00)

Priority date (day/month/year)

09 March 1999 (09.03.99)

Applicant

SONG, Si-Hoon

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

08 September 2000 (08.09.00)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Zakaria EL KHODARY

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT/KR00/00177

PCT

NOTIFICATION CONCERNING AMENDMENTS OF THE CLAIMS

(PCT Rule 62 and
Administrative Instructions, Section 417)

From the INTERNATIONAL BUREAU

To:

Korean Industrial Property Office
920 Dunsan-dong, So-ku
302-701 Taejon Metropolitan City
RÉPUBLIQUE DE CORÉE

Date of mailing (day/month/year)

18 October 2000 (18.10.00)

in its capacity as International Preliminary Examining Authority

International application No.

PCT/KR00/00177

International filing date (day/month/year)

07 March 2000 (07.03.00)

Applicant

SONG, Si-Hoon

The International Bureau hereby informs the International Preliminary Examining Authority that no amendments under Article 19 have been received by the International Bureau (Administrative Instructions, Section 417).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Zakaria EL KHODARY

Facsimile No. (41-22) 740.14.35

Telephone No. (41-22) 338.83.38

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

| | | |
|---|-----------|--|
| (51) International Patent Classification ⁷ : C04B 33/04, 22/14 | A1 | (11) International Publication Number: WO 00/53541 (43) International Publication Date: 14 September 2000 (14.09.00) |
| (21) International Application Number: PCT/KR00/00177 (22) International Filing Date: 7 March 2000 (07.03.00) (30) Priority Data: 1999/7707 9 March 1999 (09.03.99) KR (71)(72) Applicant and Inventor: SONG, Si-Hoon [KR/KR]; 550 Imsangdong, Iksan-si, Chollabuk-do 570-380 (KR). (74) Agent: LEE, Won-Hee; Suite 805, Sung-ji Heights II, 642-16 Yoksam-dong, Kangnam-ku, 135-080 Seoul (KR). | | (81) Designated States: AU, BR, CA, CN, ID, IL, IN, JP, KR, MX, NO, NZ, SG, TR, US, ZA, Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>In English translation (filed in Korean).</i> |
| (54) Title: A VITAL MATTER AND A PRODUCING METHOD (57) Abstract The present invention relates to a vital matter promoting the growth, and increasing preservative capability of human body, animals and plants. The vital matter maximizes active rhythms of human body, animals and plants by inducing sympathy of energy and native wavelengths between it and animals or plants. In addition, the present invention relates to a producing method of the vital matter composed of the following steps: 1) preparing a composition containing kaoline (white soil) 30-40 wt%, potassium sulfate 15.0-20.0 wt%, sodium sulfate 13.0-17.0 wt%, feldspar 12.0-16.0 wt%, talc 12.0-16.0% and ferric oxide 0.5-1.5 wt%; and 2) mixing the above-mentioned composition using a compressed molding method; and 3) heating the mixed composition at 1000-1300 °C. The vital matter of the present invention can be used in whole fields of industries, and will cause the original changes in the field of industrial matters, and promote the welfare of human beings such as improvement of health and life of human. | | |

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A vital matter and a producing method

FIELD OF THE INVENTION

5 The present invention relates to a vital matter for human body, animals and plants promoting their growth and increasing preservative capability of animals and plants.

 The present invention also relates to a producing method of the vital matter composed of natural substances
10 and compounds by mixing at almost the same ratio as that of inorganic substances in human, animals and plants.

 The producing method of the present invention may be used in the whole field of industries such as building materials, things of life, a medical industry and a food
15 industry.

BACKGROUND

 Natural substances such as yellow soil and silicon dioxide mineral, and synthetic ceramic have been used in
20 the whole field of industries such as medical instruments using infrared rays and things of life.

 However, since the above-mentioned things is prepared by using the natural substances such as yellow soil and white soil as major components, content of a silicate
25 (SiO_2) is high, whereas contents of inorganic substances such as potassium, calcium, sodium, magnesium and iron are

very low. Thus, it is impossible to accomplish sympathy of energy and native wavelength between conventional substances and human body, animals and plants.

5

SUMMARY OF THE INVENTION

It is an object of this invention to provide a vital matter activating original active rhythm of human body, animals and plants at a maximum level.

It is a further object of this invention to provide a
10 producing method the vital matter.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Since the vital matter of the present invention has a similar composition to a major inorganic substance of human
15 body, animals and plants, the vital matter induces a resonance phenomenon by approaching to human body, animals and plants, so that sympathy of energy and native wavelength between it and human body, animals and plants is maximized.

20 In detail, when five or six bronze bells made from the same materials are hang and one of them rings, others ring with the same sound, which is a resonance phenomenon. The resonance phenomenon also occurs when drums or bowls made from the same materials are used for the above experiment.
25 However, the resonance phenomenon does not occur if a drum or a bowl rings and vice versa. Therefore, it is

demonstrated that things made from the same materials induce sympathy of energy and native wavelength.

Otherwise, potassium, calcium, sodium, magnesium and iron are major components of inorganic substances of human body, animals and plants. Thus, the composition of the present invention is prepared by mixing various components at almost the same ratio as that of inorganic components of human body, animals and plants. Sympathy of energy and native wavelength between the composition of the present invention and human body, animals and plants, is maximized to activate active rhythm of human body, animals and plants at maximal level.

The composition of the present invention contains kaoline(white soil) 30.0-40.0wt%, potassium sulfate 15.0-20.0wt%, sodium sulfate 13.0-17.0wt%, feldspar 12.0-16.0wt%, talc 12.0-16.0% and ferric oxide 0.5-1.5wt%. The composition is mixed by a compressed molding method with water, dried and manufactured in random forms. The resulting composition becomes plastic at 1000-1300°C for its use in various forms.

The vital matter of the present invention prepared by the above-mentioned composition has components shown in the following Table 1.

<Table 1> Average ratio of components of composition

| Components | Weight ratio (wt%) |
|----------------|--------------------|
| Potassium (K) | 19.06-23.29wt% |
| Calcium (Ca) | 14.21-17.36wt% |
| Sodium (Na) | 12.30-14.97wt% |
| Magnesium (Mg) | 11.98-14.64wt% |
| Silicon (Si) | 13.74-16.80wt% |
| Aluminum (Al) | 12.21-15.13wt% |
| Iron (Fe) | 3.48-4.26wt% |
| Titanium (Ti) | 0.95-1.17wt% |
| Manganese (Mn) | 0.28-0.40wt% |
| Zinc (Zn) | 0.17-0.20wt% |
| Germanium (Ge) | 0.07-0.09wt% |
| Selenium (Se) | 0.03-0.04wt% |
| Other elements | 1.36-1.67wt% |

The major components of the composition of the present invention are potassium, calcium, sodium and magnesium, which is similar distribution with inorganic substances of human body, animals and plants. In addition, the composition of the present invention has an affinity for silicon and aluminium abundantly contained in soil.

Whereas, as shown in Table 2, general ceramic products contain large amounts of silicon and aluminium, and small amounts of potassium, calcium, sodium and magnesium.

<Table 2> Average ratio of components of general ceramic products

| Components | Weight ratio (wt%) |
|----------------|--------------------|
| Aluminium (Al) | 35.36-43.22wt% |
| Silicon (Si) | 31.33-38.30wt% |
| Potassium (K) | 7.73-9.45wt% |
| Magnesium (Mg) | 3.56-4.36wt% |
| Iron (Fe) | 3.52-4.31wt% |
| Calcium (Ca) | 3.40-4.16wt% |

| | |
|----------------|--------------|
| Sodium(Na) | 2.79-3.63wt% |
| Titanium(Ti) | 0.03-0.04wt% |
| Other elements | 2.10-2.57wt% |

The ratio of components of general yellow soil ceramic is shown in Table 3.

- 5 <Table 3> Average ratio of components of general yellow soil ceramic

| Components | Weight ratio (wt%) |
|--|--------------------|
| Silicon dioxide(SiO_2) | 64.08-79.42wt% |
| Aluminium oxide(Al_2O_3) | 9.45-11.55wt% |
| Sodium oxide(NaO_2) | 3.32-4.02wt% |
| Ferric oxide(Fe_2O_3) | 2.93-3.58wt% |
| Potassium oxide(K_2O) | 2.22-2.71wt% |
| Other elements | 8.02-9.80wt% |

- As shown in Table 2 and 3, the general ceramic and
 10 the general yellow soil ceramic contains mostly silicon and aluminium as major components, and small amounts of potassium, calcium, sodium and magnesium which are associated with human body, animals and plants. Thus, Sympathy of energy and native wavelength between the
 15 general ceramic or the general yellow soil ceramic and human body, animals and plants, does not occur.

Hereinafter, the present invention is described in detail.

EXAMPLES

Practical and presently preferred embodiments of the present invention are illustrative as shown in the following Examples.

However, it will be appreciated that those skilled in the art, on consideration of this disclosure, may make modifications and improvements within the spirit and scope of the present invention.

Example 1: Preparation of the vital matter

The composition of the present invention contains the following components: i) Kaoline (white soil) 30-40wt%; ii) potassium sulfate 15.0-20.0wt%; iii) sodium sulfate 13.0-17.0wt%; iv) feldspar 12.0-16.0wt%; v) talc 12.0-16.0%; and vi) ferric oxide 0.5-1.5wt%.

In the above composition, potassium sulfate and sodium sulfate may be replaced by the same amounts of potassium chloride and sodium chloride ions. However, because a moisture drying efficiency of sulfate salts are better than that of chloride salts, the present inventors selected potassium sulfate and sodium sulfate to increase the moisture drying efficiency.

The composition was manufactured in form of minute powder of 100-150 mesh. After the composition was mixed by the compressed molding method or with 20-30wt% of water to mold in the fixed form, it was dried by hot wind at 40-80°C for 10-15 hours and heated 1000-1300°C for 2-3 hours to be plastic.

The manufactured composition was prepared in various form to be used for various industry.

The composition of the present invention activated active rhythm of human body, animals and plants at a maximum level by inducing sympathy of energy and native wavelength between it and human body, animals and plants. In addition, this activation by the composition of the present invention was superior to that by conventional ceramic products.

Generally, infrared rays irradiation of silicon is higher than that of potassium. Whereas, the composition of the present invention was excellent in bioaffinity and sympathy of energy and native wavelength between it and human body, animals and plants.

Experiment 1: Physiological reactivity of the composition of the present invention and general ceramic products

The present inventors performed the physiological reactivity experiment of the composition and general ceramic products, and compared their physiological reactivities. The result was shown in Table 4.

<Table 4> The results of comparing the physiological reactivity.

| | | | | |
|------|-------------------------------------|--------------------------------|-------------------------------|-------------------------|
| Item | Refinement velocity of coffee taste | Refinement velocity of tobacco | Deodorization of Refrigerator | Freshness of vegetables |
|------|-------------------------------------|--------------------------------|-------------------------------|-------------------------|

| | | | | |
|--|------------------------|------------------------|---------------------------------|------------------|
| Yellow soil ceramic | 10 hours* (3 hours) | 10 hours* (3 hours) | No effect | No effect |
| Medical ceramic | 10 min* (20 sec) | 5 min* (5 sec) | From .2 hours after starting | 180% increase |
| Industrial ceramic | 5 hours* (1 hour) | 1 hour* (30 min) | From 5 hours after starting | 130% increase |
| The composition of the present invention | 30 sec* (10 sec) | 20 sec* (2 sec) | From 30 min after starting | 250% increase |

<*:the experiment was performed at room temperature, ():

the experiment was performed at 50°C

The composition of the present invention was superior to the conventional ceramic products in acting velocity and efficiency of refinement toward advantages of living body.

In addition, the composition was prepared in form of minute powder of 200-350 mesh and mixed with synthetic resin to the concentration of 5-30%. The resulting mixture can be used in various forms for industry!

For example, after the composition of the present invention was added to polyethylene film which has been used a vinyl house for cultivating plants, the present inventors cultivated the crops using the vinyl house made from the polyethylene film containing the composition of the present invention and the vinyl house made from general polyethylene film. The results was shown in Table 5.

<Table 5> The results of cultivating the crops

| crop | Average yield | | |
|-----------------|-------------------|--|-------------------------------|
| | Polyethylene film | Polyethylene film containing the component | Comparison (increasing ratio) |
| Chinese cabbage | 416 kg | 499 kg | 20% increase |
| Cucumber | 422 kg | 527 kg | 25% increase |
| Tomato | 575 kg | 719 kg | 25% increase |
| Red pepper | 179 kg | 250 kg | 40% increase |

(increase per 100 m² of cultivation areas)

5 As shown in Table 5, when the synthetic resin containing the composition of the present invention was used, the yield of the crops was increased more about 20-40% than that when the general synthetic resin was used. Therefore, these results demonstrate that the composition of the present invention accelerates physiological activity of plants.

INDUSTRIAL APPLICABILITY

15 The composition of the present invention, a vital matter for human body, animals and plants, can maximize sympathy of an activation energy and a native wavelength between it and human body, animals and plants. Thus, the composition of the present invention can be used for industry and will cause the original changes in the field of industrial matters.

In detail, for example, the composition of the present invention can be used all the industries including building materials and raw materials of various synthetic resins (especially, vinyl, plastic, etc.), various food containers, cosmetics and cosmetics containers, various medical instruments (especially, medical instruments using far infrared rays), medicines and medicines containers, containers for cultivating various plants, deodorants and chemical products such as agricultural chemicals. Therefore, it is expected that the composition of the present invention, the vital matter for human body, animals and plants, will promote the welfare of human beings such as improvement of health and life of human.

Those skilled in the art will appreciate that the conceptions and specific embodiments disclosed in the foregoing description may be readily utilized as a basis for modifying or designing other embodiments for carrying out the same purposes of the present invention. Those skilled in the art will also appreciate that such equivalent embodiments do not depart from the spirit and scope of the invention as set forth in the appended claims.

What is Claimed is

1. A vital matter and a producing method thereof, wherein the vital matter is prepared by the following steps: 1) preparing a composition containing kaoline (white soil) 30.0-40.0wt%, potassium sulfate 15.0-20.0wt%, sodium sulfate 13.0-17.0wt%, feldspar 12.0-16.0wt%, talc 12.0-16.0% and ferric oxide 0.5-1.5wt% (step 1); and 2) mixing the above-mentioned composition using a compressed molding method (step 2); and 3) heating the mixed composition at 1000-1300°C (step3).

2. The vital matter and the producing method thereof according to claim 1, wherein potassium sulfate and sodium sulfate are replaced by the same ratio of each molecular weight of sodium chloride and sodium chloride.

3. The vital matter and the producing method thereof according to claim 1, wherein the vital matter is composed of potassium 19.06-23.29wt%, calcium 14.21-17.36wt%, sodium 12.30-14.97wt%, magnesium 11.98-14.64wt%, silicon 13.74-16.80wt%, aluminium 12.21-15.13wt%, iron 3.48-4.26wt%, titanium 0.95-1.17wt%, manganese 0.28-0.40wt%, zinc 0.17-0.20wt%, germanium 0.07-0.09wt%, selenium 0.03-0.04wt% and other elements 1.36-1.67wt%.

4. The vital matter and the producing method thereof

according to claim 1, wherein a composition of the vital matter is used in combination with synthetic resins after prepared in form of minute powder of 200-350 mesh.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR00/00177

| A. CLASSIFICATION OF SUBJECT MATTER IPC7 C04B 33/04, C04B 22/14 According to International Patent Classification (IPC) or to both national classification and IPC | | |
|--|---|---|
| B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C04B Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean Patents and applications for inventions since 1975 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) NPS, PAJ | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | |
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | KR 96-14048 A (KIM, J H) 22 MAY 1996 see the whole document | 1 - 4 |
| A | US 4960737 A (CORING INCORPORATED) 02 OCTOBER 1990 see the whole document | 1 - 4 |
| A | JP 68-182163 A (KABUSHIKI KAISHA TOSHIBA) 22 JANUARY 1992 see the whole document | 1 - 4 |
| <input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex. | | |
| * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family | | |
| Date of the actual completion of the international search 15 JUNE 2000 (15.06.2000) | | Date of mailing of the international search report 19 JUNE 2000 (19.06.2000) |
| Name and mailing address of the ISA/KR Korean Industrial Property Office Government Complex-Taejon, Dunsan-dong, So-ku, Taejon Metropolitan City 302-701, Republic of Korea Facsimile No. 82-42-472-7140 | | Authorized officer KIM, Yong Jung Telephone No. 82-42-481-5557 |



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR00/00177

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---------------------|----------------------------|---------------------|
| KR 96-14048 A | 22-05-96 | NONE | NONE |
| US 4960737 A | 02-10-90 | BR 8904466 A | 17-04-90 |
| | | EP 360404 A1 | 28-03-90 |
| | | JP 2160661 A2 | 20-06-90 |
| JP 62-182163 A | 23-09-89 | EP 231130 A2 | 05-08-87 |
| | | KR 8903510 B1 | 23-09-89 |

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|--|---|---|
| Applicant's or agent's file reference EMYANGSANGTO | FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. | |
| International application No. PCT/KR00/00177 | International filing date (<i>day/month/year</i>) 07 MARCH 2000 (07.03.2000) | (Earliest) Priority Date (<i>day/month/year</i>) 09 MARCH 1999 (09.03.1999) |
| Applicant SONG, Si-Hoon | | |

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawing** to be published with the abstract is Figure No. _____

- ☐ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.
- ☒ None of the figures.

A. CLASSIFICATION OF SUBJECT MATTER**IPC7 C04B 33/04, C04B 22/14**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and applications for inventions since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

NPS, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| A | KR 96-14048 A (KIM, J H) 22 MAY 1996 see the whole document | 1 - 4 |
| A | US 4960737 A (CORING INCORPORATED) 02 OCTOBER 1990 see the whole document | 1 - 4 |
| A | JP 68-182163 A (KABUSHIKI KAISHA TOSHIBA) 22 JANUARY 1992 see the whole document | 1 - 4 |

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family *

Date of the actual completion of the international search

15 JUNE 2000 (15.06.2000)

Date of mailing of the international search report

19 JUNE 2000 (19.06.2000)

Name and mailing address of the ISA/KR

Korean Industrial Property Office
Government Complex-Taejon, Dunsan-dong, So-ku, Taejon
Metropolitan City 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

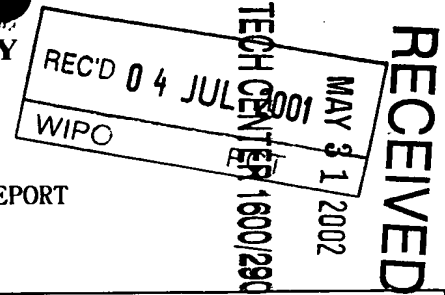
KIM, Yong Jung

Telephone No. 82-42-481-5557

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR00/00177

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---------------------|---|----------------------------------|
| KR 96-14048 A | 22-05-96 | NONE | NONE |
| US 4960737 A | 02-10-90 | BR 8904466 A EP 360404 A1 JP 2160661 A2 | 17-04-90 28-03-90 20-06-90 |
| JP 62-182163 A | 23-09-89 | EP 231130 A2 KR 8903510 B1 | 05-08-87 23-09-89 |



| | | |
|--|---|--|
| Applicant's or agent's file reference OFPO-06-15 | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/KR00/00177 | International filing date (day/month/year) 07 MARCH 2000 (07.03.2000) | Priority date (day/month/year) 09 MARCH 1999 (09.03.1999) |
| International Patent Classification (IPC) or national classification and IPC IPC7 C04B 33/04, C04B 22/14 | | |
| Applicant SONG, Si-Hoon | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:
- I ☒ Basis of the report
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

| | |
|--|---|
| Date of submission of the demand 08 SEPTEMBER 2000 (08.09.2000) | Date of completion of this report 27 JUNE 2001 (27.06.2001) |
| Name and mailing address of the IPEA/KR Korean Intellectual Property Office Government Complex-Daejeon, Dunsan-dong, Seo-gu, Daejeon Metropolitan City 302-701, Republic of Korea Facsimile No. 82-42-472-7140 | Authorized officer KIM, Sang Eun Telephone No. 82-42-481-5568 |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR00/00177

I. Basis of the report

1. With regard to the elements of the international application:*

☒ the international application as originally filed☐ the description:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the claims:

pages _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the drawings:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☒ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. ☐ The amendments have resulted in the cancellation of:☐ the description, pages _____☐ the claims, Nos. _____☐ the drawings, sheet _____5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR00/00177

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|------------|-----|
| Novelty (N) | Claims 1-4 | YES |
| | Claims | NO |
| Inventive step (IS) | Claims 1-4 | YES |
| | Claims | NO |
| Industrial applicability (IA) | Claims 1-4 | YES |
| | Claims | NO |

2. Citations and explanations (Rule 70.7)

Documents cited in the International Search Report:

D1) KR 96-14048 A

D2) US 4960737 A

D3) JP 4-3226 B

The vital matter of the claimed invention has a similar composition-kaoline, potassium sulfate, sodium sulfate, feldspar, talc, and ferric oxide-to the inorganic substance of human body, animal, and plants.

The inventions described in D1-D2 don't relate to a biocompatible composition and don't disclose the ingredient of the claimed invention.

D3 is similar to the claimed invention' objective but differs in the ingredient and ratio.

None of these documents(D1-D3) teach or fairly suggest the ingredients and ratios of the present invention.

Therefore, the invention claimed in 1-4 is novel, involves an inventive step, and is considered to be industrially applicable as specified by PCT Article 33(2), (3), and (4).